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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,417	11/07/2006	David Mail	7251/94662	8225
24628 7590 01/27/2010 Husch Blackwell Sanders, LLP Husch Blackwell Sanders LLP Welsh & Katz 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606				
EXAMINER				
CHAO, MICHAEL W				
ART UNIT		PAPER NUMBER		
2442				
MAIL DATE		DELIVERY MODE		
01/27/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/589,417

Applicant(s)

MAIL ET AL.

Examiner

Michael Chao

Art Unit

2442

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-14, 17-21, 26-29, 31-42, 45-49 and 58-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-14, 17-21, 26-29, 31-42, 45-49 and 58-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/30/2009 has been entered.

Claims 2, 15, 16, 22-25, 30, 43, 44 and 50-57 are cancelled.

Response to Arguments

Applicant's arguments, see page 13, filed 11/30/2009, with respect to the rejection(s) of claim(s) 1, 3-14, 29, 31-42 and 58-60 under Malik in view of Shen have been fully considered and are persuasive. Malik in view of Shen does not teach transcoding in an MMS environment. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Warsta in view of Malik (see above). While the references Malik and Kobata are used to support the present rejection it is the primary reference Warsta that teaches the aforementioned untaught elements of Malik in view of Shen. The arguments filed 11/30/2009, being inapplicable to the new rejection, are not further addressed.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 26-28, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 26-28 are directed toward a system while the claimed elements may be interpreted to recite only software. Software is none of a process, machine, manufacture, nor composition of matter and as such is non-statutory. To explain, claim 26 has four elements that would appear to be hardware; (mms server, mms relay, transcoder and DRM server) however, these elements may be interpreted to be software relays and servers. (See e.g. specification page 17 line 10, "the methods and apparatus described herein may be readily implemented in computer hardware or software using conventional techniques.) Therefore claim 26 would comprise solely software. It is a misnomer to term a claim a system when it comprises no physical elements.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-14, 29, 31-42, are rejected under 35 U.S.C. 103(a) as being unpatentable over Warsta et al. (US 2004/0181550, cited in OA dated 7/06/2009), in view of Malik (US 7,003,551, cited in OA dated 7/06/2009).

With respect to claims 1, 29 Warsta teaches: A method for distributing multimedia content, the method comprising:

Storing an item of multimedia content as stored multimedia content at a multimedia message center (MMSC); ("MMSC is responsible for storing incoming and outgoing MMS messages, as well as the transfer of messages between different messaging systems" Warsta paragraph [0044])

Firstly transcoding ("the adaptation of content is performed in accordance with the received capabilities" Warsta paragraph [0010]) said multimedia content for playback on a first multimedia device, thereby producing a firstly transcoded version of said multimedia content; ("The requesting network device capabilities are compared to previous requesting network device capabilities, such that if a capability match is found, previously adapted content may be transmitted to the requesting network device" And generally Warsta paragraph [0024])

Generating a content ID of said firstly transcoded version of said multimedia content; ("the adapted content is cached within database 616 and indexed according to content ID and terminal type" Warsta paragraph [0058])

Storing said content ID of said firstly transcoded version of said multimedia content, as a stored first content ID, in association with said stored multimedia content;

(“the adapted content is cached within database 616 and indexed according to content ID and terminal type” Warsta paragraph [0058])

Transcoding said stored multimedia content for playback on said second multimedia device (“The requesting network device capabilities are compared to previous requesting network device capabilities, such that if a capability match is found, previously adapted content may be transmitted to the requesting network device, obviating the need for an additional adaptation.” And generally Warsta paragraph [0024]; Also, “Not only are network elements 108 and 110 capable of caching or otherwise storing content 104, but they are also able to cache/store (hereinafter “cache”) the various adaptations of content 104” Warsta paragraph [0029])

Warsta does not explicitly recite:

Receiving, at said MMSC an instruction to forward said item of multimedia content to a second multimedia device, said instruction comprising a copy of said firstly transcoded version of said multimedia content; and

Performing the following in response to said instruction:

Accessing said stored content using said stored first content ID of said firstly transcoded version of said multimedia content, said accessing comprising:

Generating a received content ID of said copy of said firstly transcoded version of said multimedia content; and

Looking up said stored multimedia content by comparing said received content ID with said stored first content ID; and

1 Malik teaches such lacking elements:

2 Receiving, at said MMSC an instruction to forward said item of multimedia
3 content to a second multimedia device, said instruction comprising a copy of said firstly
4 transcoded version of said multimedia content; and ("Some of the recipients may in turn
5 forward this e-mail communication to other groups of recipients." Malik column 2 line 15)

6 Performing the following in response to said instruction:

7 Accessing said stored content using said stored first content ID of said
8 firstly transcoded version of said multimedia content, said accessing comprising:

9 Generating a received content ID of said copy of said firstly transcoded
10 version of said multimedia content; and ("The duplication checker next identifies
11 the properties associated with the attachment file in the file header" Malik column
12 6 line 35)

13 Looking up said stored multimedia content by comparing said received
14 content ID with said stored first content ID; and ("processing step generates
15 information by which the attachment file comparison section 26 of the duplication
16 checker 24 can search the attachment file storage database 28 for identical
17 attachment files" Malik column 5 line 35)

18 A person of ordinary skill in the art at the time of invention would have combined
19 Warsta with the forwarding and content ID lookups of Malik by including a message
20 table with forwarding functionality as described in Malik in the invention of Warsta. It
21 would have been obvious at the time the invention was made to a person of ordinary

skill in the art to combine Warsta with Malik in order to consolidate the storage for forwarded communications (Malik column 2 line 40).

With respect to claims 3, 31 Warsta teaches: wherein said storing an item of multimedia content comprises storing said item of multimedia content together with an original content identifier (ID) identifying said content. ("the adapted content is cached within database 616 and indexed according to content ID and terminal type" Warsta paragraph [0058])

With respect to claims 4, 32 Warsta in view of Malik teaches: wherein said storing an item of multimedia content comprises storing said item of multimedia content together with an original content identifier (ID) that uniquely identifies said content. ("the adapted content is cached within database 616 and indexed according to content ID and terminal type" Warsta paragraph [0058]; Also "such as checksum determination" Malik column 5 line 30)

With respect to claims 5, 33 Warsta in view of Malik teaches: storing said item of multimedia content in its original form. ("Not only are network elements 108 and 110 capable of caching or otherwise storing content 104, but they are also able to cache/store (hereinafter "cache") the various adaptations of content 104" Warsta paragraph [0029]; Also "stores the attachment file" Malik column 5 line 40)

With respect to claims 6, 34 Warsta in view of Malik teaches: storing said item of multimedia content such that said content may be partly or wholly reconstituted. ("Not only are network elements 108 and 110 capable of caching or otherwise storing content 104, but they are also able to cache/store (hereinafter "cache") the various adaptations

1 of content 104" Warsta paragraph [0029]; Also "The mail store then creates a link in the
2 record of the header database to the attachment in the cache portion" Malik column 5
3 line 61)

4 With respect to claims 7, 35 Warsta in view of Malik teaches: receiving said
5 original content ID from a provider of said content. (See Warsta Figure 5 content IDs as
6 filenames; also "The duplication checker next identifies the properties associated with
7 the attachment file in the file header, which may include any of: title/name . . ." Malik
8 column 6 line 35)

9 With respect to claims 8, 36 Warsta in view of Malik teaches: further comprising
10 generating said original content ID by applying either of a predefined hashing method
11 and a predefined fingerprinting method to said content and using either of the resulting
12 hash and fingerprint as said original content ID. ("the adapted content is cached within
13 database 616 and indexed according to content ID and terminal type" Warsta paragraph
14 [0058]; also "such as checksum determination" Malik column 5 line 30)

15 Regarding claims 9, 37, Warsta teaches: associating said original content ID with
16 different transcoded versions of said content. ("the adapted content is cached within
17 database 616 and indexed according to content ID and terminal type" Warsta paragraph
18 [0058])

19 Regarding claims 10, 38, Warsta teaches: sending a notification to said first
20 multimedia device indicating that said content is available for download to said
21 multimedia device. ("The M-Notification.ind inform mobile terminal 316 about the

1 contents of received message 326 and its purpose is to allow mobile terminal 316 to
2 fetch multimedia message 326 from MMSC 320" Warsta paragraph [0050])

3 Regarding claims 11, 39, Warsta teaches: delivering said firstly transcoded
4 content to said first multimedia device in an MMS message. ("The messaging
5 capabilities include mobile originated messages sent to other mobile terminals or
6 applications and application originated messages sent to mobile terminals or other
7 applications" Warsta paragraph [0044]; See also Warsta paragraph [0033])

8 Regarding claims 12, 40, Warsta in view of Malik teaches: delivering said firstly
9 transcoded content to said first multimedia device, in an mms message, together with
10 any of said content IDs. ("extraction of certain attachment file header information." Malik
11 column 5 line 30)

12 Regarding claims 13, 41, Warsta in view of Malik teaches: receiving said firstly
13 transcoded content from said multimedia device in an MMS message; and ("Some of
14 the recipients may in turn forward this e-mail communication to other groups of
15 recipients." Malik column 2 line 15)

16 Regenerating said content ID of said firstly transcoded content. ("generate file
17 identification information. . . . such as checksum determination, or extraction of certain
18 attachment file header information." Malik column 5 line 30; Also "The duplication
19 checker next identifies the properties associated with the attachment file in the file
20 header" Malik column 6 line 35)

21 Regarding claims 14, 42, Warsta in view of Malik teaches: wherein said
22 regenerating step comprises regenerating said content ID of said firstly transcoded

content using the same method used to generate said content ID of said firstly transcoded content. ("generate file identification information. . . . such as checksum determination, or extraction of certain attachment file header information." Malik column 5 line 30)

Claims 17-21, 26-28, 45-49, are rejected under 35 U.S.C. 103(a) as being unpatentable over Warsta et al. (US 2004/0181550), in view of Malik (U.S. 7,003,551), in view of Kobata (US 2002/0077986).

With respect to claims 17, 45, Warsta in view of Malik does not teach protecting transcoded content with a content protection key (CPK). Kobata teaches said limitation, "the digital asset may be stored in an encrypted format. . . decrypting the digital asset may include retrieving a key from the intermediate server" (Kobata paragraph [0035]). A person of ordinary skill in the art would have modified Warsta in view of Malik with Kobata by including in the message table a digital rights manager of the form described in Kobata. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to modify the combination to provide "secure [] communication and control of digital assets" (Kobata Abstract)

With respect to claims 18, 46, Warsta in view of Malik does not teach identifying any rights associated with providing said content to any of said multimedia devices;

Generating at least one entitlement as a function of said rights; and

Providing said content to any of said multimedia devices in accordance with said entitlement. ("Furthermore depending on the digital rights defined for a particular copy

1 or form of digital content 320, the end-user may be able to forward the digital content"
2 Kobata paragraph [0124]). A person of ordinary skill in the art would have modified
3 Warsta in view of Malik with Kobata by including in the message table a digital rights
4 manager of the form described in Kobata. It would have been obvious at the time the
5 invention was made to a person of ordinary skill in the art to modify the combination to
6 provide "secure [] communication and control of digital assets" (Kobata Abstract)

7 With respect to claims 19, 47, Warsta in view of Malik does not teach determining
8 if said copy of said firstly transcoded content is protected;

9 If said copy is protected, determining if said content may be forwarded to said
10 second multimedia device as indicated by any rights associated with either of said
11 content and the recipient of said firstly transcoded content; and

12 If said content may be forwarded, protecting and forwarding said secondly
13 transcoded content to said second multimedia device. ("Furthermore depending on the
14 digital rights defined for a particular copy or form of digital content 320, the end-user
15 may be able to forward the digital content" Kobata paragraph [0124]). A person of
16 ordinary skill in the art would have modified Warsta in view of Malik with Kobata by
17 including in the message table a digital rights manager of the form described in Kobata.
18 It would have been obvious at the time the invention was made to a person of ordinary
19 skill in the art to modify the combination to provide "secure [] communication and control
20 of digital assets" (Kobata Abstract)

21 With respect to claims 20, 48, Warsta in view of Malik in view of Kobata teaches:
22 protecting said secondly transcoded content with a content protection key (CPK)

1 associated with said secondly transcoded content. ("The tracking techniques may be
2 employed to implement "super-distributions" in which users to which a digital asset is
3 distributed are authorized to redistribute the digital asset to other users (though perhaps
4 with more limited rights)." Kobata paragraph [0021])

5 With respect to claims 21, 49, Warsta in view of Malik in view of Kobata teaches:
6 wherein said first determining step comprises determining that said copy of said firstly
7 transcoded content is protected by identifying a CPK stored in association with the
8 content ID. ("As an alternative, rights may be stored locally but separately from the
9 digital asset with a link to the digital asset" Kobata paragraph [0023])

10 With respect to claim 26, Warsta teaches: A multimedia content distribution
11 system comprising:

12 An MMS server;

13 An MMS relay; ("MMSC" Warsta paragraph [0044]. MMSC as defined by the
14 applicant includes an MMS server which controls storage (Warsta paragraph [0044])
15 and an MMS relay which controls transcoding (Warsta paragraph [0052]) and delivery
16 (Warsta paragraph [0044]))

17 A transcoder; and ("For each distinct mobile terminal capability type, a content
18 adaptation is prepared for each mobile terminal capability type" And generally Warsta
19 paragraph [0061])

20 Wherein said MMS server, MMS relay, transcoder are individually or
21 cooperatively operative to:

1 Store an item of multimedia content as stored multimedia content;
2 ("MMSC is responsible for storing incoming and outgoing MMS messages, as well as
3 the transfer of messages between different messaging systems" Warsta paragraph
4 [0044])

5 Firstly transcode said multimedia content for playback on a first
6 multimedia device, thereby producing a firstly transcoded version of said multimedia
7 content; ("The requesting network device capabilities are compared to previous
8 requesting network device capabilities, such that if a capability match is found,
9 previously adapted content may be transmitted to the requesting network device" And
10 generally Warsta paragraph [0024])

11 Generate a content ID of said firstly transcoded version of said multimedia
12 content;

13 Store said content ID of said firstly transcoded version of said multimedia
14 content, as stored first content ID, in association with said stored multimedia content;
15 ("the adapted content is cached within database 616 and indexed according to content
16 ID and terminal type" Warsta paragraph [0058])

17 transcode said stored multimedia content for playback on said
18 second multimedia device content for playback on said second multimedia device. ("The
19 requesting network device capabilities are compared to previous requesting network
20 device capabilities, such that if a capability match is found, previously adapted content
21 may be transmitted to the requesting network device, obviating the need for an
22 additional adaptation." And generally Warsta paragraph [0024]; Also, "Not only are

network elements 108 and 110 capable of caching or otherwise storing content 104, but they are also able to cache/store (hereinafter "cache") the various adaptations of content 104" Warsta paragraph [0029])

Warsta does not explicitly recite:

A DRM server,

Receive an instruction, via a multimedia message service (MMS) message, to forward said item of multimedia content to a second multimedia device, said instruction comprising a copy of said firstly transcoded version of said multimedia content; and perform the following in response to said instruction:

access said stored content using said stored first content ID of said firstly transcoded version of said multimedia content, comprising:
generating a received content ID of said stored copy of said firstly transcoded version of said multimedia content; and

looking up said stored multimedia by
comparing said received content ID with said stored first content ID; and

Malik teaches:

Receive an instruction, via a multimedia message service (MMS) message, to forward said item of multimedia content to a second multimedia device, said instruction comprising a copy of said firstly transcoded version of said multimedia content; and ("Some of the recipients may in turn forward this e-mail communication to other groups of recipients." Malik column 2 line 15)

perform the following in response to said instruction:

access said stored content using said stored first content ID of said firstly transcoded version of said multimedia content, comprising: generating a received content ID of said stored copy of said firstly transcoded version of said multimedia content; and ("The duplication checker next identifies the properties associated with the attachment file in the file header" Malik column 6 line 35)

looking up said stored multimedia by comparing said received content ID with said stored first content ID; and ("processing step generates information by which the attachment file comparison section 26 of the duplication checker 24 can search the attachment file storage database 28 for identical attachment files" Malik column 5 line 35)

A person of ordinary skill in the art at the time of invention would have combined Warsta with the forwarding and content ID lookups of Malik by including a message table with forwarding functionality as described in Malik in the invention of Warsta. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to combine Warsta with Malik in order to consolidate the storage for forwarded communications (Malik column 2 line 40).

Furthermore, Warsta in view of Malik does not disclose A DRM server.

Kobata teaches a DRM server: "Fig. 3 shows a computer device 310 in communication with a server-based global rights manager unit" (Kobata paragraph [0116]). A person of ordinary skill in the art would have modified Warsta in view of Malik with Kobata by including in the message table a digital rights manager of the form

described in Kobata. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to modify the combination to provide "secure [] communication and control of digital assets" (Kobata Abstract)

With respect to claim 27, Warsta in view of Malik in view of Kobata teaches: wherein any of said MMS server, MMS relay, transcoder, and DRM server are individually or cooperatively operative to track whom said content is sent and with what rights. ("The server may maintain a virtual database of digital assets and may use the database in implementing functions such as data mining, tracking, and monitoring of rights consumption" Kobata paragraph [0018])

With respect to claim 28, Warsta in view of Malik in view of Kobata teaches: wherein said DRM server acts as either of a probe and a proxy between any of said MMS server, said MMS relay, and said transcoder. ("The server-based approach to communicating digital assets provides a number of other advantages. . . . it may be used to control digital asset delivery. . ." Kobata paragraph [0024])

Claims 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warsta et al. (US 2004/0181550), in view of Malik (US 7,003,551), in view of Mattis et al. (US 6,128,623, cited in OA dated 7/06/2009)

With respect to claim 58-60, Warsta in view of Malik teaches: wherein said generating a content ID of said firstly transcoded version of said multimedia content comprises:

Applying either of the following to said firstly transcoded version of said multimedia content, and producing a result:

A predefined hashing method; and

A predefined fingerprinting method; and ("generate file identification information. . . . such as checksum determination, or extraction of certain attachment file header information." Malik column 5 line 30)

Using said result as said [received] content ID.

Warsta in view of Malik does not teach that the content ID and the received content ID are fingerprinted/hashed, while "looking up said stored multimedia content by comparing said received content ID with said stored first content ID" as recited in claim 1. Mattis teaches such an element. "this two-level indexing structure facilitates the ability to associate multiple alternate objects with a single name" (Mattis column 8 line 23). "Unlike other cache systems that use the name or URL of an object as the key by which the object is referenced, embodiments of the invention use a "fingerprint" of the content that makes up the object itself, to locate the object." (Mattis column 8 line 28). "each name key in the directory table 110 maps to one of the vectors of alternates 122a-n, which enable the cache to select one version of an object from among a plurality of related versions. For example, the object 52 may be a Web page ad server 40 can store versions of the object in the English, French, and Japanese languages." (Mattis column 14 line 33). A person of ordinary skill in the art would have modified Warsta in view of Malik by using duplicate detection according to the 'fingerprint' method of Mattis, and further included the two-level indexing of Mattis by incorporating the relevant data

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- 1 structures into the cache of Warsta in view of Malik. It would have been obvious at the
- 2 time the invention was made to a person of ordinary skill in the art to modify Warsta in
- 3 view of Malik with Mattis in order to have an efficient web proxy.

4

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Chao whose telephone number is (571)270-5657. The examiner can normally be reached on 8-4 Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Pwu can be reached on (571)272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. C./
Examiner, Art Unit 2442

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2446